

AKSH OPTIFIBRE LIMITED

Material Safety Data Sheet

Material Name: Fibre Reinforced Plastic Rods (FRP Rods) / Aramid Reinforced Plastic Rods (ARP Rods)

Section 1 - Product and Company Identification

Product Name(s): Fibre Reinforced Plastic Rods (FRP) / Aramid Reinforced Plastic Rods (ARP)/ Central Strength Member (CSM)

Manufacturer Name

AKSH OPTIFIBRE LIMITED

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Section 2 - Composition / Information on Ingredients

Component Percent by Wt.

Fiber Glass Continuous (CAS No.: 65997-17-3) / Aramid Yarn (CAS No.: 308069-56-9) 70-85 % (wt)

Nonhazardous Cured Modified Acrylate Resin (CAS No.: None) 15-30 % (wt)

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following:

Glass filaments, Nuisance particulate.

Component Information/Information on Non-Hazardous Components

No additional information available.

Section 3 - Hazards Identification

Appearance and Odor: Glass reinforced rod with no odor.

Emergency Overview: No unusual conditions are expected from this product. Potential Health Effects

Inhalation: Fiber glass continuous filament is a mechanical irritant. Breathing dusts and fibers from cutting this product may cause short-term irritation of the mouth, nose and throat.

Skin Contact: Dust and fibers from this product may cause itching and short term irritation. Skin irritation is known to occur chiefly at the pressure points such as around the neck, wrists, waist and between the fingers.

Eye Contact: Dusts and fibers from cutting this product may cause temporary mechanical irritation to the eyes.

Ingestion: Ingestion may cause short-term mechanical irritation of the stomach and intestines.

Medical Conditions Aggravated by Exposure: Respiratory or skin conditions that are aggravated by mechanical irritants may be at an increased risk for worsening from exposure to this product.

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Section 4 - First Aid Measures

Inhalation:

If inhaled, immediately remove the affected person to fresh air. If symptoms persist, get medical attention.

Skin Contact:

For skin contact, wash immediately with soap and water. Use a wash cloth to help remove fibers. To avoid further irritation, do not rub or scratch affected areas. Rubbing or scratching may force fibers into the skin. If irritation persists, get medical attention.

Never use compressed air to remove fibers from the skin.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

Ingestion:

Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal blockage does not occur.

Potential acute health effects:

No known significant effects or critical hazards.

Section 5 - Fire Fighting Measures

Flash Point: None

Flash Point Method: Not applicable

Upper Flammability Limit: Not applicable

Lower Flammability Limit: Not applicable

Flammability Classification: Non-flammable

Auto Ignition Temp.: Not applicable

Extinguishing Media: Use any extinguishing media appropriate for the surrounding fires.

Foam (Specifically trained personnel only)

Water Fog (Specifically trained personnel only)

Dry Chemical Powder

Carbon Dioxide

Sand

Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Unusual Fire & Explosion Hazards: None known.

Fire-Fighting Instructions:

Use self-contained breathing apparatus (SCBA) and full bunker turnout gear in a sustained fire.

Hazardous Combustion Products:

Primary combustion products are carbon monoxide, carbon dioxide and water. Other undetermined compounds could be released in small quantities.

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Section 6 - Accidental Release Measures

Containment Procedures:

This material will settle out of the air. If concentrated on land, it can then be scooped up for disposal as a non-hazardous waste. This material will sink and disperse along the bottom of waterways and ponds. It cannot easily be removed after it is waterborne; however, the material is non-hazardous in water.

Clean-Up Procedures:

Scoop up material and put into a suitable container for disposal as a non-hazardous waste.

Response Procedures:

Isolate area. Keep unnecessary personnel away.

Section 7 - Handling and Storage

Handling Procedures:

No special procedures are required for this material.

Storage Procedures:

No special procedures are required for this material.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines:

General Product Information:

As manufactured, continuous filament glass fibers are irrespirable. Continuous filament glass products that are chopped, crushed or severely processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards.

Ventilation:

General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection:

A properly fitted dust respirator such as the 3M model 8210 in high humidity environments or equivalent should be used under the following conditions:

1) any dust environment; 2) when mechanically altering product (cutting, crushing, grinding, milling or other similar dust generating process).

Use respiratory protection in accordance with your company's respiratory protection program, local regulations.

Skin Protection:

Normal work clothing (long sleeved shirts and long pants) is recommended. Use leather or other appropriate gloves, if necessary, for type of operation. Skin irritation is known to occur chiefly at the pressure points such as around the neck, wrists, waist and between the fingers.

Eyes/Face Protective Equipment:

Wear safety glasses or goggles when mechanically altering product (cutting, crushing, grinding, milling or other similar dust generating process).

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Work Practices:

Handle using good industrial hygiene and safety practices. Avoid unnecessary contact with dusts and fibers by using good local exhaust ventilation. Remove material from the skin and eyes after contact. Remove material from clothing using vacuum equipment (never use compressed air and always wash work clothes separately from other clothing. Wipe out the washer or sink to prevent loose glass fibers from getting on other clothing). Keep the work area clean of dusts and fibers made during fabrication by using vacuum equipment to clean up dusts and fibers (avoid dry sweeping or using compressed air as these techniques re-suspend dusts and fibers into the air.)

Section 9 - Physical & Chemical Properties

Appearance: Flexible fiber glass rod Odor: None

Physical State: Solid

Vapor Pressure (mm Hg @ 20 C): Not applicable

Vapor Density (Air=1): Not applicable

Boiling Point: Not applicable

Solubility (H₂O): Insoluble

Specific Gravity (Water=1): 2.20

Freezing Point: Not applicable

Evaporation Rate (n-Butyl Acetate=1): Not applicable

Section 10 - Chemical Stability & Reactivity Information

Stability: This is a stable material.

Conditions to Avoid: None expected.

Incompatible Materials: None expected.

Hazardous Decomposition Products:

Primary combustion products are carbon monoxide, carbon dioxide and water. Resin may decompose in a fire. Other undetermined compounds could be released in small quantities.

Hazardous Polymerization: will not occur.

Section 11 - Toxicological Information

Acute and Chronic Toxicity:

A: General Product Information

Dusts and fibers may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion, and chest tightness.

Carcinogenicity:

A: General Product Information

Fiber Glass Continuous Filament: The International Agency for Research on Cancer (IARC) in June, 1987, categorized fiber glass continuous filament as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human as well as animal studies was evaluated by IARC as insufficient to classify fiber glass continuous filament as a possible, probable, or confirmed cancer causing material. The American Conference of Governmental Industrial Hygienists (ACGIH) A4 classification, not classifiable as a human carcinogen, for respirable continuous filament glass fibers is based on inadequate data in terms of its carcinogenicity in humans and/or animals. For respirable continuous filament glass fibers, a TLV-TWA of 1 fiber/cc was adopted to protect workers against mechanical irritation. The TLV-TWA of 5 mg/m³ was adopted for non-respirable glass filament fiber, measured as inhalable dust, to prevent mechanical irritation of the upper respiratory tract.

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Section 12 - Ecological Information

Eco-toxicity:

This material and its dust particles are not expected to cause harm to animals, plants or fish.

Environmental Fate:

No data available for this product.

Section 13 - Disposal Considerations

Waste Number & Descriptions:

A: General Product Information

No components are identified as hazardous wastes.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions:

This product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC, however, local requirements for waste disposal may differ and should be reviewed. It can be landfilled or incinerated in accordance with applicable local regulations.

Do not discharge into drains, sewers or watercourses. Consult appropriate authorities before disposing of this material.

Section 14 - Transportation Information

Shipping Name: Not regulated for transport.

Hazard Class: None

UN/NA #: None

Packing Group: None

Required Label(s): None

Additional Info.: None

TDG Information

Shipping Name: Not regulated for transport.

Hazard Class: None

UN/NA #: None

Packing Group: None

Required Label(s): None

Additional Info.: None

Additional Transportation Regulations: No additional information available.

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Section 15 - Regulatory Information

A: General Product Information: No additional information available.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

Acute Health Hazard: Yes

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: No

C: Clean Air Act

None of this product's components are listed on the Clean Air Act-1990 Hazardous Air Pollutants List.

State Regulations:

General Product Information: No additional information available.

Section 16 - Other Information

Personal Protection

To be supplied by user depending upon use.

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Key/Legend:

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.